

[Unchanged Claim 4:]

4. The process of claim 1, wherein the temperature of treatment ranges from 400 to 800°C.

[Unchanged Claim 5:]

5. The process of claim 4, wherein the temperature of treatment ranges from 600 to 700°C.

[Unchanged Claim 6:]

5 6. The process of claim 1, wherein the treatment is performed for a period of at least one hour.

[Unchanged Claim 7:]

7. The process of claim 6, wherein the treatment is performed for a period of at least two hours.

[Unchanged Claim 8:]

10 8. The process of claim 1, wherein the one or more sulfur halides comprise one or more sulfur chlorides.

[Unchanged Claim 9:]

9. The process of claim 8, wherein the one or more sulfur chlorides comprise at least one of sulfur monochloride and sulfur dichloride.

[Unchanged Claim 10:]

10. The process of claim 1, wherein the gaseous mixture further comprises at least one of nitrogen, air, helium, neon, and argon.

Cancel Claim 11.

Unchanged Claim 12:

12. The process of claim 1, wherein the treatment performs at least one of:
reducing the size of at least a portion of refractory metal oxide particles in the body and
reducing the concentration of refractory metal oxide particles in the body.

Unchanged Claim 13:

13. The process of claim 12, wherein the particles include at least one of
5 chromia and zirconia.

Unchanged Claim 14:

14. The process of claim 1, wherein the treatment reduces the concentration of
water and hydroxyl groups in the body.

Unchanged Claim 15:

15. The process of claim 1, wherein the gaseous mixture comprises 0.1 to 100
vol.% of the one or more sulfur halides.

Unchanged Claim 16:

10 16. The process of claim 15, wherein the gaseous mixture comprises about 6
to about 7 vol.% of the one or more sulfur halides.

Unchanged Claim 17:

17. The process of claim 1, wherein the body is subjected to a treatment with a
gas comprising chlorine prior to the treatment with the one or more sulfur halides.

Unchanged Claim 18:

15 18. The process of claim 17, wherein the gaseous mixture comprising one or
more sulfur halides comprises about 1 to about 2 vol.% of the one or more sulfur halides.

[Unchanged Claim 19:]

19. The process of claim 17, wherein the chlorine treatment reduces the concentration of water and hydroxyl groups in the body.

[Replacement Claim 20:]

20. The process of claim 17, wherein the chlorine treatment performs at least one of: reducing the size of at least a portion of chromia particles in the body and
5 reducing the concentration of chromia particles in the body.

[Unchanged Claim 21:]

21. The process of claim 1, wherein the body is subjected to treatment with a gas comprising oxygen subsequent to the treatment with the one or more sulfur halides.

[Replacement Claim 22:]

22. (amended) A process for preparing optical fiber, comprising the step of:
drawing fiber from a preform comprising a sol-gel silica tube, the tube formed by
10 a process including the step of, prior to sintering the tube, treating the tube at a temperature ranging from 300 to 900°C with a gaseous mixture comprising one or more non-oxygenated sulfur chlorides, and
wherein the one or more sulfur chlorides are generated by reaction of sulfur present in the tube with chlorine flowed over the tube.

[Unchanged Claim 23:]

23. The process of claim 22, wherein the temperature of treatment ranges from
15 400 to 800°C.

[Unchanged Claim 24:]

24. The process of claim 23, wherein the temperature of treatment ranges from about 600 to about 700°C.

C²
[Unchanged Claim 25:]

25. The process of claim 22, wherein the treatment is performed for a period of at least two hours.

[Unchanged Claim 26:]

5 26. The process of claim 22, wherein the one or more sulfur chlorides comprise at least one of sulfur monochloride and sulfur dichloride

Cancel Claim 27.

[Unchanged Claim 28:]

28. The process of claim 22, wherein the treatment performs at least one of: reducing the size of at least a portion of refractory metal oxide particles in the tube and reducing the concentration of refractory metal oxide particles in the tube.

C³
[Unchanged Claim 29:]

10 29. The process of claim 22, wherein the gaseous mixture comprises 0.1 to 100 vol.% of the one or more sulfur chlorides.

[Unchanged Claim 30:]

30. The process of claim 29, wherein the gaseous mixture comprises about 6 to about 7 vol.% of the one or more sulfur chlorides.

[Unchanged Claim 31:]

31. The process of claim 22, wherein the tube is subjected to a treatment with a gas comprising chlorine prior to the treatment with the one or more sulfur chlorides.

[Unchanged Claim 32:]

15 32. The process of claim 22, wherein the tube is subjected to treatment with a gas comprising oxygen subsequent to the treatment with the one or more sulfur chlorides.

[Unchanged Claim 33:]

33. The process of claim 22, where the tube is selected from an overcladding tube and a substrate tube.

[Replacement Claim 34:]

34 (amended) A process for preparing optical fiber, comprising the step of:
drawing fiber from a preform comprising a sol-gel silica tube, the tube formed by
5 a process including the steps of, prior to sintering the tube:
providing a silica dispersion,
forming from the dispersion a gelled tube comprising water, hydroxyl groups, and
refractory metal oxide particles,
10 heating the entire tube to a temperature ranging from 400 to 800°C and,
while the tube is at the temperature, treating the tube with a gaseous mixture
comprising one or more non-oxygenated sulfur halides, the treatment performed for a
time period that provides sufficient diffusion of the one or more sulfur halides into the
tube such that at least one effect selected from the group consisting of reducing the
15 concentration of water and hydroxyl groups in the tube, reducing the size of at least a
portion of refractory metal oxide particles in the tube, and reducing the concentration of
refractory metal oxide particles in the tube, is achieved.

[Replacement Claim 35:]

35. (amended) The process of claim 34, wherein the temperature of treatment ranges from 600 to 700°C.

[Replacement Claim 36:]

20 36. (amended) The process of claim 34, wherein the time period is at least two hours.

[Replacement Claim 37:]

37. (amended) The process of claim 34, wherein the one or more sulfur halides comprises one or more sulfur chlorides.

[Replacement Claim 38:]

38. (amended) The process of claim 37, wherein the one or more sulfur chlorides comprise at least one compound selected from the group consisting of sulfur monochloride and sulfur dichloride.

5

[Replacement Claim 39:]

39. (amended) The process of claim 34, wherein the treatment reduces the size of at least a portion of refractory metal oxide particles in the tube, reduces the concentration of refractory metal oxide particles in the tube, or both reduces the size of at least a portion of refractory metal oxide particles in the tube and reduces the concentration of refractory metal oxide particles in the tube.

10

[Replacement Claim 40:]

40. (amended) The process of claim 34, wherein the treatment reduces the concentration of water and hydroxyl groups in the tube.

[Replacement Claim 41:]

41. (amended) The process of claim 37, wherein the gaseous mixture comprises about 6 to about 7 vol.% of the one or more sulfur chlorides.

15

[Replacement Claim 42:]

42. (amended) The process of claim 34, wherein the tube is subjected to a treatment with chlorine gas prior to the treatment with the one or more sulfur halides, wherein the chlorine gas treatment performs at least one action selected from the group consisting of reducing the concentration of water and hydroxyl groups in the tube, reducing the size of at least a portion of chromia particles in the tube, and reducing the concentration of chromia particles in the tube.

20